**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** LIQUID ADJUST  
24-hr. Emergency #: (800) 424-9300  
US D.O.T. Hazardous Materials Registration No.: 062504-001-008MO  
Commercial & Government Entity (CAGE) Code: 0YCK6

**CHEMICAL NAMES & SYNONYMS:** Sour #211  
HMIS RATINGS: Health 2 / Fire 0 / Reactivity 1  
FORMULA: Proprietary  
CHEMICAL FAMILY: Inorganic acid.  
SUPPLIER'S NAME: Fabriclean Supply of Kansas, LC  
SUPPLIER'S ADDRESS: 14400 W. 97th Terrace  
Lenexa, KS 66215  
SUPPLIER'S TELEPHONE: (800) 832-0096

**SECTION 2 - INGREDIENTS**

**INGREDIENTS**  
Hydrofluorosilicic acid a.k.a. fluorosilicic acid, hexafluorosilicic acid, hexafluor silicate dihydrogen  
CAS # 16961 - 83 - 4

Phosphorous acid CAS 13598-36-2

**PERCENT**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Hydrofluorosilicic acid</td>
<td></td>
</tr>
<tr>
<td>Phosphorous acid</td>
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</table>

**ADOPTED VALUES**  
As Fluorides:  
ACGIH TLVs: TWA 2.5 ppm  
OSHA PELs: TWA 2.5 ppm  
NIOSH RELs: TWA 2.5 ppm  
DFKs: TWA 2.5 ppm

**SECTION 3 - HEALTH HAZARDS IDENTIFICATION**

**Threshold Limit Value:** As indicated in Section 2 (above).

**Primary Routes of Entry:** Eye/skin contact. Inhalation. Ingestion.

**EFFECTS OF OVEREXPOSURE:**  
EYES: Irritation, damage with long exposure, can cause burns and ulcers on eyes.  
SKIN: Exposure to low concentrations may not cause irritation symptoms for several hours. High concentrations cause severe irritation and damage to tissue. INHALATION: Irritation and/or injury to lung and tracheal tissue. Can cause perforation of nasal septum. INGESTION: Irritation and/or injury to stomach and esophageal tissue, causing nausea, vomiting, diarrhea, and abdominal pain. Can cause severe bone changes and dental defects due to inorganic fluorides, with chronic overexposure.

**SUPPLEMENTAL HEALTH INFORMATION:** Pre-existing eye, skin and respiratory disorders may be aggravated by exposure. Product ingredients not listed by OSHA, NTP, IARC, NIOSH, MAK as being carcinogenic.

**SECTION 4 - FIRST AID MEASURES**

**EYES:** Object is to flush material out of eyes immediately, then seek medical attention. Immediately flush with plenty of water for at least 15 minutes while holding eyelids open to ensure flushing of the entire eye surface. Get medical attention.

**SKIN:** Immediately wash contaminated areas with plenty of water for at least 15 minutes. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear, which cannot be decontaminated. Seek medical attention if symptoms develop or persist.

**INHALATION:** Remove to fresh air; if breathing is difficult, have trained personnel administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. Get immediate medical attention. (Note: Coughing, sneezing or other symptoms of upper respiratory irritation may serve as a warning of exposure to high airborne concentrations.)

**INGESTION:** DO NOT INDUCE VOMITING! Rinse mouth with water; give large quantities of water or milk to drink. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give more liquids. Do not give anything by mouth to an unconscious or drowsy person. Get immediate medical attention. (Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician.)

**SECTION 5 - FIRE & EXPLOSION HAZARD DATA**

**Flash Point:** Not combustible  
**Flammable Limits:** N/A
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Extinguishing Media: As appropriate to adjacent fire.

Special Fire Fighting Procedures: Containers may explode from heat of fire, if possible remove from fire zone. If removal impossible, cool containers with water. Water should be sprayed from upwind if possible and from as far away as possible. Product can react with water or steam to produce toxic and corrosive fumes.

Unusual Fire and Explosion Hazards: Flammable hydrogen generated when acid is in contact with some metals. When vaporized by heat of fire toxic hydrofluoric acid gas is given off, so, for fires in areas where material is stored, do not enter any enclosed or confined fire space without proper protective equipment as given in section 6, and including self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Wear protective equipment, provide adequate ventilation with inside spillage. Prevent drainage to streams or city sewage systems. Use water spray to prevent fuming. Cover contaminated area with sodium bicarbonate or a mixture of equal parts soda ash with slaked lime. Do not touch spilled material; stop leak if you can do it without risk. Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large Spills: Dike far ahead of liquid spill for later disposal.

Other Information: Surface subject to spills with this product can become slippery when wet. Exercise extreme caution when cleaning up spills.

Local regulations must be reviewed to ensure compliance with any procedures or chemical requirements not herein mentioned or which may vary from the procedures herein described.

SECTION 7 - HANDLING AND STORAGE

Precautions to be taken in handling and storing: Do not get liquid or vapor in eyes, on skin, or clothing. Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Respirator with filter cartridge for acid gases should be used for exposures above PEL/TLV limitations, and up to 20 ppm as F. For higher concentrations use an SCBA with full face mask. Consult your equipment supplier.

Ventilation Required: Local ventilation or fume scrubbing to maintain airborne concentrations below PEL/TLV.

Protective Clothing: Rubber, protective gloves; full face shield, splash goggles; rubber coveralls, eye wash and safety shower.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear to very light amber color

State: Liquid

pH: 1% solution < 2.0

Odor: Slight pungent odor

Boiling Point: 212 deg. F

Specific Gravity: 1.18

Solubility in water: Complete

SECTION 10 - STABILITY AND REACTIVITY DATA

Stability: Stable

Incompatibility: Concentrated sulfuric acid, explosives, toxicants, radioactive materials, readily oxidizable materials, alkali metals, combustible solids, organic peroxides, glass and stoneware.

Hazardous Decomposition: Toxic and corrosive fumes of fluorides.

Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicological Information: N/D

Chemical Fate Information: Chronic: Prolonged exposure could result in bone changes, corrosive effect on mucous membranes including ulceration of nose, throat and bronchial tubes, cough, shock, pulmonary edema, fluorosis, coma and death.

SECTION 12 - ECOLOGICAL INFORMATION

UNK
This product is corrosive in nature, and may be subject to laws and regulations governing hazardous waste. Therefore, all federal, state and local regulations must be reviewed prior to disposal.

**SECTION 14 - TRANSPORT INFORMATION**

Proper Shipping Name: Corrosive liquids, N.O.S. (contains fluorosilicic acid)

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Packing Group</th>
<th>UN#</th>
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<tr>
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<td></td>
<td>UN1760</td>
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**SECTION 15 - REGULATORY INFORMATION**

(Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer’s responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.)

(A simple explanation of each act [legislation] is included in this section. Ingredients listed in these sections means they are governed by that particular act.)

**DOT:** The Department of Transportation (DOT) regulates those substances that present a potential hazard during transportation. There may be labeling, special packaging, and/or placarding required.

**WHMIS:** THE WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM is Canada's version of Hazard Communication. It is a Canada-wide communication system that identifies hazardous materials in the workplace. It combines the provincial Occupational Health and Safety Act with the federal Hazardous Products Act. Its provisions closely parallel the US. regulations.

Fluorosilicic acid at 1% levels.

**DOT:** The Department of Transportation (DOT) regulates those substances that present a potential hazard during transportation. There may be labeling, special packaging, and/or placarding required.

Product not listed.

**NFPA - NATIONAL FIRE PROTECTION ASSOCIATION:** The National Fire Protection Association (NFPA) is a nonprofit, educational organization. The goal of NFPA is to promote the science of fire protection and prevention. With this aim, NFPA has developed information on the hazardous properties of many chemicals, which enables the user to come up with safe procedures during the chemicals’ use, storage, and transportation. There are three categories of hazards: Health (H), flammability (F), and reactivity (R). Within each category, there are numerical ratings from 0 - 4, with 0 indicating no hazard, 4 indicating severe hazard.

Product not listed.

**HAZARD COMMUNICATION:** OSHA’s Hazard Communication Standard initially went into effect November 1985/May 1986. It is OSHA’s most comprehensive worker protection regulation. It provides for information and training for workers encountering chemical exposures in the workplace. The standard requires the use of labels and Material Safety Data Sheets for all regulated chemicals.

**National Toxicology Program (NTP):** A list of carcinogens. Product not listed.

**International Agency For Research On Cancer:** Another carcinogen list. Product not listed.

**Subpart Z - OSHA:** (Found at 1910.1000-.1101) If a chemical is on this list, it means there are specific training requirements on the handling, etc. Product not listed.

**Threshold Limit Values: ACGIH:** Threshold limit values (TLVs) which refer to airborne concentrations of substances and represent conditions under which nearly all workers must be repeatedly exposed day after day without adverse effect.

Product not listed.

**Process Safety Management - OSHA:** OSHA established a regulation (1910.119) to monitor and control safety at certain types of industrial facilities. Compliance is triggered by specified quantities of specific chemicals.

Product not listed.

**Proposition 65 - California:** Proposition 65 refers to an initiative passed by the California voters in the November 1986 elections. It is the Safe Drinking Water and Toxic Enforcement Act of 1986. One of the components is the listing of chemicals known to cause cancer or reproductive toxicity.
MATERIAL SAFETY DATA SHEET

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Twelve months after a chemical is listed, a person in the course of doing business must warn another person who may consume, come into contact with, or otherwise be exposed to that chemical.

Product not listed.

The New Clean Air Act - Hazardous Air Pollutants: This rule regulates the emissions of 112 of the organic chemicals identified in the Cats list of 189 hazardous air pollutants.

Product not listed.

SECTION 16 - OTHER INFORMATION

AS A GENERAL RULE, PREVENT AND PROTECT THIS PRODUCT FROM UNAUTHORIZED USE

FOR INDUSTRIAL USE ONLY !!!!!!

END OF REPORT

NAME: Robert C. Jaudon
(636) 296-3131, 296-3888
DATE ISSUED: 07/29/04
DATE REVISED:

< = LESS THAN
> = MORE THAN
UNK = UNKNOWN
N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

In accord with the philosophy established by the Occupational Safety and Health Administration's Hazard Communication Final Rule, 1985, this Material Safety Data Sheet has been designed to emphasize the hazardous portions (ingredient[s]) utilized in the total formulation. As a result, the information herein stresses the most hazardous component(s) only. By this approach, we feel better knowledge and awareness should substantially contribute to reduce exposure and injury to workers involved with the use of this product. The information supplied in this document is presented for exactly this purpose. As required by law, this data should be thoroughly read and made available to anyone who may be responsible for handling this material. All data provided relates to the concentrated product as shipped. Actual usage rates and further dilution will, in most cases, greatly reduce, if not eliminate, the potential for worker injury. Any and all chemical products should be handled with extreme care and only by authorized and informed personnel. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this MSDS should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

The information and recommendations provided in this Material Safety Data Sheet have been obtained from data we believe to be reliable. We provide no warranties, expressed or implied, or accept no responsibility for loss associated with the use or handling of this product. This information is offered for your review and consideration. Efforts should be extended to determine the applicability of this product for your specific intended use. We know of no medical condition, other than those noted in this Material Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.

REASON FOR REVISION: